ABSTRACT

A high-efficiency vane rotary expander is provided, which prevents a loss due to incomplete expansion or overexpansion from occurring because the volume of an operating chamber may vary. This is done by forming a plurality of discharge ports (28, 29, 48, 49, 50) in an inner wall (21a, 41a) of a cylinder in the circumferential direction, placing, among these discharge ports, the discharge port (28, 48), to which the operating chamber (25, 45) connects at the initial stage of the discharging process, at a position of {180 x (1 + 1/n)} degrees from a small clearance (22, 42) defined between the cylinder (21, 41) and the rotor (23, 43) in the direction where a shaft rotates, and providing a valve mechanism (30a, 30b, 51a, 51b, 52a, 52b).